

CLAIMS:

1. A catheter comprising:

a central shaft;

at least one guide wire movably positioned adjacent to the central shaft;

at least one stent disposed about a distal portion of the at least one guide wire, having an unexpanded state and an expanded state;

a removable sheath, the removable sheath being disposed about the stent in the unexpanded state, the removable sheath constructed and arranged to retain the at least one stent in the unexpanded state, the removable sheath being retractable to allow the at least one stent to expand from the unexpanded state to the expanded state, the sheath having a distal end, the distal end of the sheath having at least one opening, the at least one opening constructed and arranged to allow passage of the at least one guide wire and the at least one stent therethrough;

and a tip overlapping the distal end of said sheath for holding said sheath together.

2. The catheter of claim 1 wherein the at least one stent is bifurcated.

3. The sheath of Claim 1 wherein the at least one opening extends from a predetermined position on the retractable sheath to the distal end of the said sheath.

4. The sheath of claim 1 wherein the at least one opening is selected from the group consisting of a slit, zipper, groove, hole and any combination thereof.

5. The sheath of claim 1 wherein the at least one opening extends to said distal end of said retractable sheath by a groove that is formed by the at least one guide wire upon retraction of said retractable sheath.

6. The sheath of claim 1 wherein said distal tip is connected to said central shaft, at least a portion of the distal tip overlapping the distal end of the retractable sheath prior to retraction of the retractable sheath.
7. A stent delivery catheter comprising:
- a central shaft;
  - a distal tip, the distal tip extending distally from the central shaft, the distal tip having a proximal ridge, the proximal ridge having a diameter larger than the central shaft;
  - at least one guide wire, at least one stent disposed about at least a portion of the at least one guide wire, the at least one guide wire being movable relative to the central shaft;
  - a retractable sheath disposed about the central shaft and the at least one guide wire the retractable sheath having a distal edge, the distal edge being removably engaged to the distal tip, the proximal ridge of the distal tip overlapping the distal edge of the retractable sheath, the retractable sheath being proximally retractable from the distal tip.
8. The catheter of claim 7 wherein the retractable sheath further comprises at least one opening, the at least one opening comprising a predetermined area of the retractable sheath proximal to the distal edge.
9. The catheter of claim 7 wherein the retractable sheath further comprises a weakened portion, the weakened portion comprising a predetermined area of the retractable sheath proximal to the distal edge.
10. The catheter of claim 8 wherein the at least one opening extends to said distal edge of said sheath by a slit.

11. The catheter of claim 8 wherein the at least one opening extends to said distal edge of said sheath by a groove.
12. The catheter of claim 8 wherein the at least one opening extends to said distal edge of said sheath by a zipper.